

ARAVINDAN M

METALLURGIST

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ABOUT ME

To pursue engineering and research, contribute in a outstanding manner & to acquire sufficient knowledge in my relevant field, and To hone my competency in metallurgical industry which I could pursue a professionally enriching career in Metallurgy, Organisation objectives through systematic approaches.



Professional Experience

- **Graduate Engineer Trainee** in **Bharat Forge Limited**, Pune at **Metallurgical Quality Control and Heat Treatment** since June'18.



Knowlegde & skill set

- Knowledge on various Metallography and Mechanical testing, Forging, heat treatment processes, Heat treating equipment, process & Quality control Consideration.
- Failure analysis of the failed parts during heat treatment through various metallography studies to diagnose the cause of failure and to resolve it.
- Strong Knowledge on Heat Treatment process for various Aluminium Alloys, Steels & Alloys prospect and preparing MOS (Manufacturing Operation Sheet) for the same.
- Preparation of material test plan and report compilation based on test result analysis (Metallurgical and Mechanical testing).
- Thorough Knowledge on Pyrometry & Calibrations.
- Knowledge on Carburizing and Low Pressure Carburizing in Sealed Quench Furnace and Low Pressure Carburization furnaces respectively.

Responsibilities & Expertise:

- Incoming quality inspection of raw material, approving it for production and final inspection of the parts prior to assembly and supply.
- Metallurgical testing of all Automobile parts Microstructural evaluation, Grain size determination, Inclusion Rating, Jominy quench test, Case depth measurement.
- Performing Mechanical testing like room temperature tensile, Brinell, Rockwell and Vickers hardness testing, Impact testing, and Micro hardness.
- Reporting test results for various customer like Diamler, Ashok Leyland, Spicer India (DANA), Hyundai, DRDO, ISRO as per ASTM, EN, ISO and BN and various customer standards.
- Design of basic heat treatment cycles (Annealing , Normalizing , Hardening , Tempering , Iso-thermal Annealing, Solution Annealing etc.) for various Steel grade& New product Development
- Preparing forging heating cycle, Post forging treatment such as slow cooling and anti-Flaking cycle, heat treatment cycle for all closed die forging and monitoring Dimensional Quality assurance & heat treatment.
- Monitoring Heat Treatment process parameters (HT graph, Quench delay, As-quench hardness etc.) and furnace irregularities (Calibration, SAT, TUS, job loading pattern and location etc.) on daily basis to ensure the quality of the job.

- Preparing all quality related document including Metallurgical scope of supply- MSS, Raw material technical delivery condition sheet, Manufacturing process plan-MPP, Quality assurance plan-QAP, process flow sheet and control plan for every part in production done through closed die forging.
- Quality Assurance Approving authority of all furnace calibrations (As per AMS 2750E).



Project Works

- **“Optimization and Simulation of Casting process for the elimination of Micro Shrinkage on supporting Compressor mount”** done at **Aquasub, Coimbatore.**
- **“A Study on Microstructure, Micro hardness and Corrosion behavior of SMAW Welded modified P91”** done at **Government College of Engineering, Salem.**



Field of Interest

- Metallurgical and Mechanical Testing.
- Heat Treatment Of steel.
- Metallurgical Failure Analysis/New Product Development.



Education

COURSE	YEAR OF PASSING	NAME OF THE INSTITUTION	PERCENTAGE
B.E (Metallurgical Engineering)	2018	Government College of Engineering, Salem-11.	8.52
HSC	2014	Unity Matric Higher Secondary School, Sholinghur, Vellore.	89.08
SSLC	2012	Unity Matric Higher Secondary School, Sholinghur, Vellore.	93.8

*First class with Distinction



Industrial Exposure

Plants Visited:

- CAPARO Forging – Sriperumbudur. 5 days
- JSW Steel Ltd – Salem Works. 1 day
- TVS Brakes India Ltd – Sholinghur. 15 days

Internship Undergone:

- Aquasub – Coimbatore. 15 days



Co-Curricular Activities

- Secured first prize in poster presentation on topic: “Fluidized bed furnace” in SFAME-15 at GCE Salem.
- Attended a workshop on “Automobiles” at NIT – TRICHY 2016.
- Attended a workshop on “Non Destructive Testing” at CEG Guindy, Anna University.
- Attended a certification course on “Non Destructive Testing” conducted by Centre of Excellence in Welding Engineering and Technology at PSG College of Technology, Coimbatore.
- Attended a workshop on “Surface Hardening of Steels” at Government College of Engineering – Anna University, Salem.



Extra Curricular Activities

- Cracked **GATE** with **56 marks** in Metallurgy.
- Awarded as **Student of the year** from the stream of Metallurgical Engineering for the academic achievements and placement activities in the college.
- **Placement Coordinator** for Metallurgical Engineering.
- **Industrial Visit Coordinator** for Metallurgical Engineering.
- Treasurer of “Society for Advancement of Metallurgical Engineers (SFAME)-17 at GCE SALEM.
- Event coordinator of professor “Brahm Prakash memorial quiz” competition for Higher Secondary School students in the year 2017.
- Attained 100% placements acting as the placement coordinator of the Metallurgical Engineering Branch of GCE Salem.



Personal Details

Father's Name : Mani K

Mother's Name : Jothi M

D.O.B : 29-08-1996

Gender : Male

Nationality : Indian

Languages known : Tamil and English (can speak fluently)
Telugu (can speak decently)

Declaration

I, (*Aravindan M*), do hereby confirm that the information given above is true to the best of my Knowledge and also I assure you that I will do my best of services to the organization if I am given an opportunity.

Yours Sincerely

(M Aravindan)